Web Development – Mr. Turner

Project – Concentration Card Game

**Project Overview**

In Concentration, pairs of cards are pulled out of a standard deck and laid out in a rectangular pattern. The player(s) flip 2 cards each turn, trying to match up the pairs. When a player finds a pair, (s)he collects it, scoring a point.

**The Page**

You will program the game using the playing card engine developed in class.

First, go through the deck and pull out 12 pairs (one for each rank except Ace). Build a new, 24 card deck out of the pairs and shuffle.

Create, on screen, a 6X4 grid of card backs.

The player will click card backs, revealing the cards. The player should only be allowed to reveal 2 cards at a time. If the cards match, take them out of the grid and put them into the player’s collected pile. If the cards do not match, hide them again.

The game ends when the grid is empty.

**Programming Hints**

Create a deck array for the grid and move all of the cards into it.

Create an array of image elements and keep it synchronized with the deck array. Using ***this***, you can keep track of which images have been clicked so that you can more easily update them.

**Enhancements**

* Create a turn limit. The player can see how many matches (s)he can make in X turns. The limit should be at least 1 turn per card in the grid.
* Make the game a 2-player game. It can be player vs. player, with 2 people at the same computer. Whenever a player makes a match (s)he gets to go again. The winner of the game is the person with the most cards in his or her collected pile at the end of the game.
* Deal out all 52 cards for a large game. In order for 2 cards to match, they must be the same color.
* Create a multiplayer game, where the number of players is determined by the users before the game begins.

**Programming Requirements**

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| * You must code your own HTML and CSS. Use of a drag and drop interface or the usage of code downloaded from the internet is not permitted. |
| * Use of deprecated code is not permitted. Use an HTML 5 reference as your guide. |
| * Your home page must be named *index.html*. |
| * You must comment your name into the top of every page. |
| * Your code must be structured in a consistent and legible manner |
| * Your text must be organized through the use of sectioning tags (div, span, p, h1 – h6). Tables are acceptable for data but not for page design. |
| * Your interface must be smooth and easy to figure out for a client. |
| * Your pages must be formatted using CSS. |

*You project is to be submitted via Moodle. Compress all of the necessary files into a zip or rar file. The file should have the following name:*

*First Name Last Name War*